

II. Rejection of Claims 32, 34, 36-43 Under 35 U.S.C. §112, Second Paragraph

Applicants have amended claims 32, 34, 36-40 to clarify that the polishing pad is a non-abrasive pad configured for use with a polishing slurry. With this amendment, Applicants submit that the phrase "chemical mechanical planarization", objected to by the Examiner, has been removed. Although Applicants believe that the term chemical mechanical planarization as used to modify a polishing pad was clear and properly used to identify pad properties for semiconductor wafer polishing, Applicants have amended the claims to expedite prosecution and reserve the right to refile the unamended claims in a separate application. With the amendments, Applicants submit that it is clear that the presently claimed polishing pad does not possess any abrasive and polishes the semiconductor wafer with the polishing slurry. Accordingly, Applicants submit that the §112 rejection has been traversed.

III. Claim Rejections Under 35 U.S.C. §103(a)

The Examiner rejected claims 32, 34, and 36-43 as obvious over Hibbard (U.S. Patent No. 5,454,844) in view of McGarvey (U.S. Patent No. 3,427,765) and Kirchner (U.S. Patent No. 2,187,743). These references refer to generic sanding devices and fail to disclose a polishing pad assembly either utilizing a polishing slurry or having at least one non-abrasive polishing pad configured to polish semiconductor wafers with a polishing slurry as claimed in amended claims 32, 36-38 and 40.

In order to avoid the apparent misinterpretation of the term chemical mechanical planarization, Applicants have amended all of the independent claims to eliminate that terminology and emphasize that a **non-abrasive** pad used in chemical mechanical planarization processing of semiconductor wafers **in cooperation with a polishing slurry** is claimed herein. Accordingly, each of claims 32, 34 and 36-40 are non-obvious in light of the cited art. Applicants note that a fixed abrasive version of the polishing pad assembly would also distinguish over the cited references, and Applicants specifically reserve the right to file claims directed to a fixed abrasive version of a polishing pad assembly for semiconductor wafers in a continuation application.

Applicants also note that claims 32 and 34 further distinguish over the cited references in that a metal belt is claimed. The Examiner cited the McGarvey reference as disclosing an abrasive belt. The Examiner combined that with the Kirchner reference disclosing an abrasive

article mounted on a disk which may have a backing that includes a resilient metal. Not only do all the present claims specifically recite a non-abrasive polishing pad, claims 32 and 34 also recite a metal belt which requires significant flexibility to continuously maintain a curvature and flex each time the belt moves around a belt driving device. In contrast to the metal belt of claims 32 and 34, the Kirchner reference relates to a disk which is supposed to bend upon application of a pressure and then return to a planar configuration after the pressure is released. The belt of claims 32 and 34 are in a continuous state of flex and, when mounted on a belt driving apparatus, are continuously under pressure. Thus, a particular type of metal flexibility is necessary for the invention of claims 32 and 34. Furthermore, there is no teaching to combine the McGarvey and Kirchner references as the Kirchner reference emphasizes the advantage of applying a metal back disk to clean out channels or corners (page 2, lines 58-70). Accordingly, for at least the reasons presented above, Applicants respectfully submit that claims 32, 34, 36-38, and 40 are allowable over the art of record. Claims 39 and 41-43 are dependent claims, therefore their allowability directly follows from allowability of independent claims 32, 34, 38, and 40.

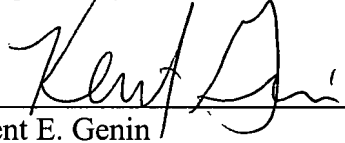
IV. New Claim 44

Applicants have added new claim 44 directed to a method of utilizing a polishing pad assembly, such as claimed in claim 32, for polishing a semiconductor wafer. Applicants submit that claim 44 is fully supported by the original specification of the present application. Applicants further submit that none of the cited references teach or suggest the invention of claim 44.

V. Conclusion

Applicants have amended the claims to more clearly define the claimed invention. Applicants submit that the above amendments are fully supported by the specification as filed. Although Applicants have amended the claims to further emphasize the non-abrasive polishing pad feature, Applicants disagree with the Examiner's earlier rejections and reserve the right to file a continuation application directed to fixed abrasive versions of the claimed polishing pad. In light of the above amendments and remarks, Applicants respectfully submit that the pending claims are in condition for allowance. If any questions arise or issues remain, the Examiner is requested to contact the undersigned at the number listed below.

Respectfully submitted,



Kent E. Genin

Registration No. 37,834

Attorney for Applicants

BRINKS HOFER GILSON & LIONE

P.O. Box 10395

Chicago, Illinois 60610

Telephone: (312) 321-7732

G